IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Yavatkar	)) Examiner: Yao, K.)
Application No.: 09/041,979	)) **Art Group: 2664**)
Filed: March 13, 1998	))
For: Ensuring Quality of Service (QOS) for a Multi-Media Call Through Call Associated Individual Media Stream Bandwidth Control	))))

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APPEAL BRIEF
IN SUPPORT OF APPELLANT'S APPEAL
TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

Sir:

Appellant hereby submits this Brief in triplicate in support of its appeal from a

final decision by the Examiner, mailed August 13, 2003, in the above-referenced

Application. Appellant respectfully requests consideration of this appeal by the Board of

Patent Appeals and Interferences for allowance of the above-captioned patent application.

An oral hearing is not desired.

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I. REAL PARTY IN INTEREST

The invention is assigned to Intel Corporation of 2200 Mission College Boulevard, Santa Clara, California 95052.

II. RELATED APPEALS AND INTERFERENCES

To the best of Appellant's knowledge, there are no appeals or interferences related to the present appeal that will directly affect, be directly affected by, or have a bearing on the Board's decision.

III. STATUS OF THE CLAIMS

Claims 1-33 are currently pending in the above-referenced application. In the Final Office Action mailed August 13, 2003, claims 1-6, 10-12 and 14-33 stand rejected under U.S.C. §102(b) as being anticipated by Drake, Jr. et al., U.S. Patent No. 5,461,611 ("*Drake*"). Further, claims 7-9 and 13 stand rejected under U.S.C. §103(a) as being anticipated by *Drake* in view of O'Neil et al., U.S. Patent No. 5,461,611 ("*O'Neil*").

IV. STATUS OF AMENDMENTS

In response to the Final Office Action mailed on August 13, 2003, rejecting claims 1-33 under 35 U.S.C. §102(b) and 35 U.S.C. §103(a), Appellant filed a Notice of Appeal on October 14, 2003. A copy of all claims on appeal is attached hereto as an Appendix of Claims.

V.   <u>SUMMARY OF THE INVENTION</u>

According to one embodiment, a storage medium is described. A plurality of programming instructions that are executable by a processor are stored within the storage medium. When executed, the programming instructions implement a multi-media call application that effectuate quality of service (QOS) guaranty for a packet based multi-media call (CALL) through call associated individual media stream bandwidth control.

In a further embodiment, the programming instructions implement a bandwidth reservation service that requests a sub-net bandwidth manager (SBM) to allocate a portion of reserved bandwidth for a CALL to an individual media stream of the CALL, providing the SBM with call level information to allow the SBM to associate the individual media stream of the CALL with the reserved bandwidth of the CALL. In addition, the SBM manages network bandwidth of a local area network (LAN) through which the CALL is conducted.

In a further embodiment, a method is described. The method includes a multi-media call application first reserving bandwidth for media streams of a CALL at a call level with a SBM that manages network bandwidth of a LAN through which the CALL is to be conducted, and the multi-media call application subsequently causing the SBM to allocate the reserved bandwidth for the CALL to individual media streams of the CALL, causing call level information to be provided to the SBM to enable the SBM to associate the individual media streams of the CALL with the reserved bandwidth of the CALL.

In still a further embodiment, an apparatus is disclosed. The apparatus comprises a storage medium having stored within a plurality of programming instructions implementing a multi-media call application that effectuates QOS guaranty for a CALL

using call associated individual media stream bandwidth control, and a processor coupled to the storage medium that operates to execute the programming instructions.

In another embodiment, the storage medium also stores a plurality of programming instructions implementing a bandwidth reservation service that requests a SBM to allocate a portion of reserved bandwidth for a CALL to an individual media stream of the CALL, providing the SBM with call level information to allow the SBM to associate the individual media stream of the CALL with the reserved bandwidth of the CALL. The SBM also manages network bandwidth of a LAN through which the CALL is conducted.

In a further embodiment, a network is disclosed. The network includes a first client computer, a medium coupled to the first client, and a second client computer coupled to the medium. The second client computer effectuates QOS guaranty for a CALL to the first client computer through call associated individual media stream bandwidth control.

VI.   ISSUES PRESENTED

Whether claims 1-6, 10-12 and 14-33 are patentable over *Drake* under 35 U.S.C. §102(b); and

Whether claims 7-9 and 13 are patentable over under U.S.C. §103(a) as being anticipated by *Drake* in view of *O'Neil*.

VII.   GROUPING OF CLAIMS

The claims do not stand or fall together.

For the purposes of this appeal:

Claims 1, 7, 20 and 29 stand or fall together as Group I; and

Claims 2-6, 8-19, 21-28 and 30-33 stand or fall together as Group II;

Reasons for separate patentability of the above indicated Claim Groups I and II are presented in the arguments section pursuant to 37 C.F.R. § 1.192(c)(7).

VIII. ARGUMENT

1. Claim Group I

THE PENDING CLAIMS WERE IMPROPERLY REJECTED UNDER 35 U.S.C. § 102(b) BECAUSE *DRAKE* DOES NOT DISCLOSE PROGRAMMING INSTRUCTIONS THAT IMPLEMENT A MULTI-MEDIA CALL SOFTWARE APPLICATION THAT EFFECTUATE QUALITY OF SERVICE GUARANTY FOR A PACKET BASED MULTI-MEDIA CALL (CALL) THROUGH CALL ASSOCIATED INDIVIDUAL MEDIA STREAM BANDWIDTH CONTROL

Appellant respectfully submits that *Drake* fails to anticipate the claimed invention for the reasons set forth below.

Each claim in Claim Group I recites an element that is not disclosed in *Drake*.

For example, Appellant's claim 1 recites the following:

A storage medium having stored therein a plurality of programming instructions executable by a processor, wherein when executed, the programming instructions implement a multi-media call application that effectuate quality of service (QOS) guaranty for a packet based multi-media call (CALL) through call associated individual media stream bandwidth control.

Appellant's claim 20 recites:

An apparatus comprising:
a storage medium having stored therein a plurality of programming instructions implementing a multi-media call application that effectuates quality of service (QOS) guaranty for a packet based multi-media call (CALL) using call associated individual media stream bandwidth control; and
a processor coupled to the storage medium that operates to execute the programming instructions.

Appellant's claim 29 recites:

A network comprising:
a first client computer;

a medium coupled to the first client; and
a second client computer, coupled to the medium,
that effectuates quality of service (QOS) guaranty for a
packet based multi-media call (CALL) to the first client
computer through call associated individual media
stream bandwidth control.

Drake describes a quality of service management system for local area networks.

The system includes local area network (LAN) having a plurality of attached stations.

The LAN is also attached to a quality of service (QoS) allocator that implements a quality

of service management process for the LAN. A source station coupled to the LAN is the

source of a desired multimedia transmission and includes an application that requests a

QoS connection to a target station. The application is responsible for causing the

transmission of the multimedia data stream to the target station. The source station also

includes a QoS requestor manager and a QoS protocol machine that assemble a request to

reserve a QoS connection for a multi-media data stream through the LAN between the

source station and the target station. The function of the allocator is to receive the QoS

request from the target station, examine the resources of the LAN, and determine if a path

exists in the LAN between the stations which satisfies the requested level of QoS. If the

QoS exists, it is assigned to this QoS data stream. If the QoS is not available, the source

station is notified of the lack of an adequate QoS path to the intended destination. See

Drake at col. 4, ll. 17-56.

Appellant submits that Drake does not disclose effecting a QOS guarantee

through call associated individual stream bandwidth control. However, the Examiner

asserts that:

> Drake, Jr.; et al. discloses that the data includes a
> plurality of data streams, wherein each data stream is
> identified by a unique StreamID, see column 7, lines
> 48-49; column 8, line 67 to column 9, line 1. Each
> individual stream is bandwidth controlled. See Figs 4-

10. Therefore it is respectfully submitted that Drake, Jr.; et al. does anticipate the claimed invention

(See Final Office Action at page 7, section 5, paragraph 3).

Appellant submits that notwithstanding the Examiner's characterization of the reference, *Drake* does not disclose effecting a QOS guarantee through call associated individual stream bandwidth control. *Drake* does disclose a stream identifier to identify each multimedia stream. Nevertheless, *Drake* does not disclose individual stream bandwidth control. In fact, *Drake* only discloses various attributes (e.g., CurrentBandwidthAllocated, MaxBandwidthAllocatable and BandwidthAllocated). Each of these attributes deal with aggregate bandwidths allocated to multiple reserved QoS data streams running through a bridge. See Drake at column 7, lines 48-49. Therefore, Claim Group I is patentable over *Drake*.

For the foregoing reasons, Appellant submits that the Examiner has failed to search and find a printed publication or patent that discloses the claimed invention as set forth in MPEP § 706.02(a).

Claim 7 depends from claims 1. Given that dependent claims necessarily include the limitations of the claims from which they depend, Appellant submits that the invention as claimed in claim 7 is similarly not anticipated by *Drake*.

Thus, the Examiner erred in rejecting claims 1, 7, 20 and 29 under U.S.C. § 102(b).

2. <u>Claim Group II</u>

<u>A</u>.

THE PENDING CLAIMS WERE IMPROPERLY REJECTED UNDER 35 U.S.C. § 102(b) BECAUSE *DRAKE* DOES NOT DISCLOSE PROGRAMMING INSTRUCTIONS THAT DETERMINE IF A SUB-NET BANDWIDTH MANAGER (SBM) THAT MANAGES NETWORK BANDWIDTH IS CONNECTED TO A LOCAL AREA NETWORK (LAN) THROUGH WHICH THE CALL IS CONDUCTED

Claims 2-6, 10-17, 21-28 and 31-33 of Claim Group II are not anticipated under

35 U.S.C. §102(b) for the same reasons as given above with respect to Claim Group I and

further due to the additional limitation of programming instructions determining if a sub-

net bandwidth manager (SBM) that manages network bandwidth is connected to a local

area network (LAN) through which the CALL is conducted.

Appellant's arguments made above with respect to the claims of Claim Group I

apply equally to Claim Group II and are incorporated herein by reference. With respect

to programming instructions, claim 2 recites:

> The storage medium as set forth in Claim 1,
> wherein the <u>programming instructions determine if a
> sub-net bandwidth manager (SBM) that manages
> network bandwidth is connected to a local area network
> (LAN) through which the CALL is conducted,</u> and if
> the SBM is connected to the LAN, register the CALL
> with the SBM and reserve with the SBM bandwidth for
> subsequent allocation to media streams of the CALL.

Claim 10 recites:

> A storage medium having stored therein a plurality
> of programming instructions executable by a processor,
> wherein when executed, the programming instructions
> implementing a bandwidth reservation service that
> requests a sub-net bandwidth manager (SBM) to
> allocate a portion of reserved bandwidth for a packet
> based multi-media call (CALL) to an individual media
> stream of the CALL, providing the SBM with call level

information to allow the SBM to associate the individual media stream of the CALL with the reserved bandwidth of the CALL, the SBM managing network bandwidth of a local area network (LAN) through which the CALL is conducted.

Claim 14 recites:

A method comprising:
(a) a multi-media call application first reserving bandwidth for media streams of a packet based multi-media call (CALL) at a call level with a sub-net bandwidth manager (SBM) that manages network bandwidth of a local area network (LAN) through which the CALL is to be conducted; and
(b) the multi-media call application subsequently causing the SBM to allocate the reserved bandwidth for the CALL to individual media streams of the CALL, causing call level information to be provided to the SBM to enable the SBM to associate the individual media streams of the CALL with the reserved bandwidth of the CALL.

Claim 21 recites:

The apparatus as set forth in Claim 20, wherein the programming instructions determine if a sub-net bandwidth manager (SBM) that manages network bandwidth is connected to a local area network (LAN) through which the CALL is conducted, and if the SBM is connected to the LAN, register the CALL with the SBM and reserve with the SBM bandwidth for subsequent allocation to media streams of the CALL.

Claim 26 recites:

An apparatus comprising:
a storage medium having stored therein a plurality of programming instructions implementing a bandwidth reservation service that requests a sub-net bandwidth manager (SBM) to allocate a portion of reserved bandwidth for a packet based multi-media call (CALL) to an individual media stream of the CALL, providing the SBM with call level information to allow the SBM to associate the individual media stream of the CALL with the reserved bandwidth of the CALL, the SBM managing network bandwidth of a local area network (LAN) through which the CALL is conducted; and

a processor coupled to the storage medium that
operates to execute the programming instructions.

Claim 31 recites:

> The network as set forth in Claim 30, wherein the
> second client computer comprises:
> a multi-media application that effectuates the QOS
> guaranty; and
> a network bandwidth reservation service that
> requests the SBM to allocate a portion of reserved
> bandwidth for the CALL to an individual media stream
> of the CALL, providing the SBM with call level
> information to allow the SBM to associate the
> individual media stream of the CALL with the reserved
> bandwidth of the CALL, the SBM managing network
> bandwidth of a local area network (LAN) through
> which the CALL is conducted.

Appellant submits that nowhere in *Drake* is there disclosed a sub-net bandwidth

manager (or equivalent) that manages network bandwidth that is connected to a local area

network (LAN). Accordingly, Claim Group II is patentable over *Drake*.

For the foregoing reasons, Appellant submits that the Examiner has failed to

search and find a printed publication or patent that discloses the claimed invention as set

forth in MPEP § 706.02(a).

Claims 3-6 depend from claim 2, claims 11-13 depend from claim 10, claims 15-

17 depend from claim 14, claims 22-25 depend from claim 21, claims 27 and 28 depend

from claim 26 and claims 32 and 33 depend from claim 31. Given that dependent claims

necessarily include the limitations of the claims from which they depend, Appellant

submits that the invention as claimed in claims 3-6, 11-17, 22-25, 27, 28, 32 and 33 are

similarly not anticipated by *Drake*.

Thus, the Examiner erred in rejecting claims 2-6, 10-17, 21-28 and 31-33 under

U.S.C. § 102(b).

<u>B</u>.

THE PENDING CLAIMS WERE IMPROPERLY REJECTED UNDER 35 U.S.C. § 103(a) BECAUSE NEITHER *DRAKE* NOR O'NEIL DISCLOSE OR SUGGEST PROGRAMMING INSTRUCTIONS THAT DETERMINE IF A SUB-NET BANDWIDTH MANAGER (SBM) THAT MANAGES NETWORK BANDWIDTH IS CONNECTED TO A LOCAL AREA NETWORK (LAN) THROUGH WHICH THE CALL IS CONDUCTED

Claims 7-9 and 13 of Claim Group II are not obvious in view of *Drake* in view of

O'Neil under 35 U.S.C. § 103(a). *O'Neil* discloses a centralized multipoint conferencing

arrangement that uses a combination of multicast and unicast transmissions that are

bandwidth efficient. See *O'Neil* at Abstract.

Nevertheless, *O'Neil* does not disclose or suggest programming instructions

implement a multi-media call application that effectuate quality of service (QOS)

guaranty for a packet based multi-media call (CALL) through call associated individual

media stream bandwidth control. Further, *O'Neil* does not disclose or suggest a sub-net

bandwidth manager that manages network bandwidth that is connected to a LAN.

As discussed above, *Drake* does not disclose or suggest such limitations. As a

result, any combination of *Drake* and *O'Neil* would also not disclose or suggest

programming instructions implement a multi-media call application that effectuate

quality of service (QOS) guaranty for a packet based multi-media call (CALL) through

call associated individual media stream bandwidth control, or a sub-net bandwidth

manager that manages network bandwidth that is connected to a LAN.

For the foregoing reasons, Appellant submits that the Examiner has failed to

establish a *prima facie* case of obviousness as set forth in MPEP § 706.02(j).

Specifically, the Examiner has failed to show that "[t]he teaching or suggestion to make

the claimed combination ... [is] found in the prior art, and not based on Appellant's disclosure," as required by In re Vaeck, 947 F.2d 488 (Fed. Cir. 1991).

Thus, the Examiner erred in rejecting claims 7-9 and 13 under 35 U.S.C. § 103(a) in view of *Drake* and *O'Neil*.

IX. CONCLUSION

Careful review of the Examiner's rejections shows that the Examiner has failed to provide any reference, or combination of references of the prior art that shows all of the elements of each appealed claim. Therefore, Appellant respectfully submits that all appealed claims in this application are patentable and were improperly rejected by the Examiner during prosecution before the United States Patent and Trademark Office. Appellant respectfully requests that the Board of Patent Appeals and Interferences overrule the Examiner and direct allowance of the rejected claims.

This brief is submitted in triplicate, along with a check for $330.00 to cover the appeal fee for one other than a small entity as specified in 37 C.F.R. § 1.17(c). Please charge any shortages and credit any overcharges to our Deposit Account No. 02-2666.

Respectfully submitted,

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X.   APPENDIX OF CLAIMS (37 C.F.R. § 1.192(c)(9))

The claims on appeal read as follows:

1   1.   A storage medium having stored therein a plurality of programming instructions

2   executable by a processor, wherein when executed, the programming instructions implement

3   a multi-media call application that effectuate quality of service (QOS) guaranty for a packet

4   based multi-media call (CALL) through call associated individual media stream bandwidth

5   control.

1   2.   The storage medium as set forth in Claim 1, wherein the programming instructions

2   determine if a sub-net bandwidth manager (SBM) that manages network bandwidth is

3   connected to a local area network (LAN) through which the CALL is conducted, and if the

4   SBM is connected to the LAN, register the CALL with the SBM and reserve with the SBM

5   bandwidth for subsequent allocation to media streams of the CALL.

1   3.   The storage medium as set forth in Claim 2, wherein the programming instructions

2   make the determination, registration and bandwidth reservation for subsequent allocation to

3   media streams of the CALL as an integral part of establishing a connection for the CALL.

1   4.   The storage medium as set forth in Claim 2, wherein the programming instructions

2   further subsequently cause the SBM to allocate the reserved bandwidth for the CALL to

3   individual media streams of the CALL.

1   5.   The storage medium as set forth in Claim 4, wherein the programming instructions

2   invoke a bandwidth reservation service to request the SBM to allocate the reserved

3   bandwidth for the CALL to individual ones of the media streams of the CALL, providing call

4   level information to the bandwidth reservation service to enable the bandwidth reservation

5   service to include the call level information in the requests for the SBM.

1   6.   The storage medium as set forth in Claim 5, wherein the programming instructions

2   invoke the bandwidth reservation service to request the SBM to allocate a portion of the

3   reserved bandwidth for the CALL to an individual media stream of the CALL while

4   establishing an individual channel for the individual media stream during the CALL.

1   7.   The storage medium as set forth in Claim 1, wherein the CALL is an ITU-T H.323

2   compatible video conference call.

1   8.   The storage medium as set forth in Claim 7, wherein the programming instructions

2   further determine if a call level admission control gatekeeper is connected to a local area

3   network (LAN) through which the CALL is to be conducted, and if the call level admission

4   control gatekeeper is connected to the LAN, register the CALL with the call level admission

5   control gatekeeper, the registration being made in a manner that causes the call level

6   admission control gatekeeper to determine whether to admit the CALL into the LAN without

7   taking into consideration bandwidth requirement of the CALL.

1   9.   The storage medium as set forth in Claim 8, wherein the programming instructions

2   make the determination and conditional registration as an integral part of establishing a

3   connection for the CALL.

1   10.   A storage medium having stored therein a plurality of programming instructions

2   executable by a processor, wherein when executed, the programming instructions

3   implementing a bandwidth reservation service that requests a sub-net bandwidth manager

4   (SBM) to allocate a portion of reserved bandwidth for a packet based multi-media call

5   (CALL) to an individual media stream of the CALL, providing the SBM with call level

6   information to allow the SBM to associate the individual media stream of the CALL with the

7   reserved bandwidth of the CALL, the SBM managing network bandwidth of a local area

8   network (LAN) through which the CALL is conducted.

1   11.   The storage medium as set forth in Claim 10, wherein the programming instructions

2   request the SBM to allocate a portion the reserved bandwidth of the CALL to the individual

3   media stream of the CALL while establishing an individual channel for the individual media

4   stream during the CALL.

1   12.   The storage medium as set forth in Claim 10, wherein the programming instructions

2   are integral part of an operating system.

1   13.   The storage medium as set forth in Claim 10, wherein the CALL is an ITU-T H.323

2   compatible video conference call.

1   14.   A method comprising:

2   (a) a multi-media call application first reserving bandwidth for media streams

3   of a packet based multi-media call (CALL) at a call level with a sub-net bandwidth manager

4   (SBM) that manages network bandwidth of a local area network (LAN) through which the

5   CALL is to be conducted; and

6   (b) the multi-media call application subsequently causing the SBM to allocate the

7   reserved bandwidth for the CALL to individual media streams of the CALL, causing call

8   level information to be provided to the SBM to enable the SBM to associate the individual

9   media streams of the CALL with the reserved bandwidth of the CALL.

1   15.   The method as set forth in Claim 14, wherein (a) is performed as an integral part of

2   the multi-media call application establishing a connection for the CALL.

1   16.   The method as set forth in Claim 14, wherein (b) comprises the multi-media call

2   application invoking a bandwidth reservation service to request the SBM to allocate the

3   reserved bandwidth for the CALL to the individual media streams of the CALL, providing

4   the bandwidth reservation service with call level information for inclusion in the requests to

5   enable the SBM to associate the individual media streams of the CALL with the CALL.

1 17.   The method as set forth in Claim 16, wherein (b) is performed on a per individual

2 media stream basis as an integral part of establishing an individual channel for the individual

3 media stream.

1 18.   The method as set forth in Claim 14, wherein the method further comprises (c) the

2 multi-media call application determining if a call level admission control gatekeeper is

3 connected to the LAN while establishing connection for the CALL.

1 19.   The method as set forth in Claim 18, wherein if the call level admission control

2 gatekeeper is connected to the LAN, (c) further comprises the multi-media application

3 registering the CALL with the call level admission control gatekeeper in a manner that

4 causes the gatekeeper to determine whether to admit the CALL into the LAN without taking

5 into consideration bandwidth requirement of the CALL.

1 20.   An apparatus comprising:

2   a storage medium having stored therein a plurality of programming instructions

3 implementing a multi-media call application that effectuates quality of service (QOS)

4 guaranty for a packet based multi-media call (CALL) using call associated individual media

5 stream bandwidth control; and

6   a processor coupled to the storage medium that operates to execute the programming

7 instructions.

1 21.   The apparatus as set forth in Claim 20, wherein the programming instructions

2 determine if a sub-net bandwidth manager (SBM) that manages network bandwidth is

3 connected to a local area network (LAN) through which the CALL is conducted, and if the

4 SBM is connected to the LAN, register the CALL with the SBM and reserve with the SBM

5 bandwidth for subsequent allocation to media streams of the CALL.

1   22.   The apparatus as set forth in Claim 21, wherein the programming instructions make

2   the determination, registration and bandwidth reservation for subsequent allocation to media

3   streams of the CALL as an integral part of establishing a connection for the CALL.

1   23.   The apparatus as set forth in Claim 21, wherein the programming instructions further

2   subsequently cause the SBM to allocate the reserved bandwidth for the CALL to individual

3   media streams of the CALL.

1   24.   The apparatus as set forth in Claim 23, wherein the programming instructions invoke

2   a bandwidth reservation service to request the SBM to allocate the reserved bandwidth for

3   the CALL to individual ones of the media streams of the CALL, providing call level

4   information to the bandwidth reservation service to enable the bandwidth reservation service

5   to include the call level information in the requests for the SBM.

1   25.   The apparatus as set forth in Claim 24, wherein the programming instructions invoke

2   the bandwidth reservation service to request the SBM to allocate a portion of the reserved

3   bandwidth for the CALL to an individual media stream of the CALL while establishing an

4   individual channel for the individual media stream during the CALL.

1   26.   An apparatus comprising:

2   a storage medium having stored therein a plurality of programming instructions

3   implementing a bandwidth reservation service that requests a sub-net bandwidth manager

4   (SBM) to allocate a portion of reserved bandwidth for a packet based multi-media call

5   (CALL) to an individual media stream of the CALL, providing the SBM with call level

6   information to allow the SBM to associate the individual media stream of the CALL with the

7   reserved bandwidth of the CALL, the SBM managing network bandwidth of a local area

8   network (LAN) through which the CALL is conducted; and

9   a processor coupled to the storage medium that operates to execute the programming

10   instructions.

1   27.   The apparatus as set forth in Claim 26, wherein the programming instructions

2   request the SBM to allocate a portion the reserved bandwidth of the CALL to the

3   individual media stream of the CALL while establishing an individual channel for the

4   individual media stream during the CALL.

1   28.   The apparatus as set forth in Claim 26, wherein the programming instructions are

2   integral part of an operating system.

1   29.   A network comprising:

2   a first client computer;

3   a medium coupled to the first client; and

4   a second client computer, coupled to the medium, that effectuates quality of service

5   (QOS) guaranty for a packet based multi-media call (CALL) to the first client computer

6   through call associated individual media stream bandwidth control.

1   30.   The network as set forth in Claim 29, further comprising:

2   a subnet bandwidth manager (SBM), coupled to the medium, that manages the

3   bandwidth of the network.

1   31.   The network as set forth in Claim 30, wherein the second client computer comprises:

2   a multi-media application that effectuates the QOS guaranty; and

3   a network bandwidth reservation service that requests the SBM to allocate a portion

4   of reserved bandwidth for the CALL to an individual media stream of the CALL, providing

5   the SBM with call level information to allow the SBM to associate the individual media

6   stream of the CALL with the reserved bandwidth of the CALL, the SBM managing network

7   bandwidth of a local area network (LAN) through which the CALL is conducted.

1   32.   The network as set forth in Claim 31, wherein the network bandwidth reservation

2   service, provides the SBM with call level information to allow the SBM to associate the

3   individual media stream of the CALL with the reserved bandwidth of the CALL.

1   33.   The network as set forth in Claim 30, further comprising:

2   a gateway coupled to the medium;

3   a gatekeeper coupled to the medium; and

4   a router coupled to the medium.